

CLAIMS

1. A paper machine for continuous production of paper in a paper web (4), comprising a plurality of drivable rolls (5) for controlling the paper web (4) and a translation device for movement of a means essentially perpendicular to the paper web (4), which translation device comprises a motor, a holder for the means (16), and an attachment device (17), characterised in that the translation device (13) comprises
- 10        a first arm (18), which is attached to the attachment device (17) turnable around a first axis (23) of rotation and arranged to be rotated by the motor (15), and
- a second arm (19), which is arranged turnable around a second axis (28) of rotation at a distance from the first axis (23) of rotation, mechanically coupled to the first arm (18) and mechanically coupled to be turned by the turning of the first arm (18) in relation to the attachment device (17),
- 15        wherein the holder (16) is arranged on the second arm (19) turnable around a third axis (33) of rotation at a distance from the second axis of rotation and mechanically coupled to be turned by the rotation of the second arm (19) in relation to the first arm (18), and wherein the mechanical couplings and the distances between the axes (23, 28, 33) of rotation are arranged in such a way that the rotation of the first arm (18) by the motor (15) essentially results in a translation of the holder (16) in relation to the attachment device (17).
- 20        2. A paper machine according to claim 1, wherein the second arm (19) is turnably arranged on the first arm (18).
- 30        3. A paper machine according to claim 1, wherein the second arm (19) is mechanically coupled to the first arm (18) by means of a third arm (49) and a fourth arm (50), wherein the third arm is arranged on the first arm (18) turnable around a fourth axis (60) of rotation at a distance from the first axis (23) of rotation, wherein the fourth arm (50) is arranged on the third arm (49)
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turnable around a fifth axis (61) of rotation at a distance from the third axis of rotation, and wherein the second arm (19) is a turnably arranged on the fourth arm (50).

5 4. A paper machine according to claim 1, 2 or 3, wherein a first wheel (24) with a central axis is arranged fixed on the attachment device (17) so that the central axis of the first wheel (24) corresponds to the first axis (23) of rotation, and wherein a second wheel (26) with a central axis is turnably arranged on the  
10 first arm (18) and arranged fixed with the second arm (19) so that the rotational axis and central axis of the second wheel (26) corresponds to the second axis (28) of rotation, and wherein a first transfer means (31) is arranged between the first wheel (24) and the second wheel (26), wherein mechanical coupling is provided  
15 between the movement of the second arm (19) and the movement of the first arm (18).

5. A paper machine according to claim 4, wherein a third wheel (27) with a central axis is arranged fixed on the first arm (18) so  
20 that the central axis of the third wheel (27) corresponds to the second axis (26) of rotation, and wherein a fourth wheel (29) with a central axis is turnably arranged in the second arm (19) and arranged fixed with the holder (19) so that the central axis of the second wheel (26) corresponds to the third axis (33) of  
25 rotation, and wherein a second transfer means (32) is arranged between the third wheel (27) and the fourth wheel (29), in such a way that said mechanical coupling between the movement of the holder (16) and the movement of the second arm (18) is provided.

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6. A paper machine according to claim 4 or 5, wherein at least one of the transfer means (31, 32) is a turning rod (34).

7. A paper machine according to claim 6, wherein two angled  
35 cogwheels are arranged on the turning rod, each interacting with a respective one of the wheels between which the turning rod is

arranged to transfer turning, which wheels are angled cog-wheels.

8. A paper machine according to claim 4 or 5, wherein at least one of the transfer means (31, 32) is a line and wherein the wheels between which the line transfer turning movement are line wheels.

9. A paper machine according to claim 8, wherein the first wheel (24) has a diameter which is twice as large as a diameter of the second wheel (26).

10. A paper machine according to claim 5 and 8, wherein the fourth wheel (29) has a diameter being twice as large as a diameter of the third wheel (27).

11. A paper machine according to claim 7, wherein the line is constituted of a synthetic material.

12. A paper machine according to claim 4 or 5, wherein at least one of the transfer means (31, 32) is a chain and said wheels (24, 26, 27, 29), being adapted to interact with the chain, are cogwheels.

13. A paper machine according to claim 12, wherein the first wheel (24) has twice as many cogs as the second wheel (26).

14. A paper machine according to claim 5 and 12, wherein the fourth wheel (29) has twice as many cogs as the third wheel (27).

15. A paper machine according to claim 4 or 5, wherein at least one of the transfer means (31, 32) is a cog belt and said wheels (24, 26, 27, 29), being adapted to interact with the cog belt, are cogged wheels.

16. A paper machine according to claim 15, wherein the first wheel (24) has twice as many teeth as the second wheel (26).
17. A paper machine according to claim 5 and 15, wherein the fourth wheel (29) has twice as many teeth as the third wheel (27).
18. A paper machine according to claim 1, 2 or 3, wherein the mechanical coupling is provided by means of link arms.
19. A paper machine according to claim 18, wherein a first link arm (18) is arranged between the attachment device and the second arm (19) to provide said mechanical coupling to the second arm (19).
20. A paper machine according to any one of the preceding claims, wherein the rotational axes are essentially parallel to each other.
21. A paper machine according to any one of the preceding claims, wherein the distance between the first axis (23) of rotation and the second axis (28) of rotation is as big as the distance between the second axis (28) of rotation and the third axis (33) of rotation.
22. A paper machine according to claim 20, wherein at least one of the first arm (18) and the second arm (19) has a length axis being perpendicular to the axes (23, 28, 33) of rotation.
23. A paper machine according to any one of the preceding claims, wherein a measuring sensor is arranged on the holder (16).
24. A paper machine according to any one of claims 1-22, wherein a cutting tool is arranged on the holder (16) arranged to cut off the paper web (4).

25. A paper machine according to claim 24, wherein the cutting tool is a jet nozzle being arranged to output a liquid jet.

5 26. Use of a translation device in order to move, in a paper machine manufacturing a paper web (4) that during manufacturing is lead through a plurality of rolls (5), a means essentially perpendicular to the paper web (4), which translation device comprises a motor, a holder for the means (16), and an attachment  
10 device (17), **characterised in** that the translation device (13) comprises

a first arm (18) being attached to the attachment device (17) turnable around a first axis (23) of rotation and arranged to be rotated by the motor (15), and

15 a second arm (19) being arranged rotatable around a second axis (28) of rotation at a distance from the first axis (23) of rotation, mechanically coupled to the first arm (18) and mechanically coupled to be turned by the turning of the first arm (18) in relation to the attachment device (17),

20 wherein the holder (16) is arranged on the second arm (19) turnable around a third axis (33) of rotation at a distance from the second axis of rotation and mechanically coupled to be turned by the turning of the second arm (19) in relation to the first arm (18), and wherein the mechanical couplings and distances  
25 between the axes (23, 28, 33) of rotation are arranged in such a way that the turning of the first arm (18) by the motor (15) essentially results in a translation of the holder (16) in relation to the attachment device (17).